Assessing Risk: The Value of Volume Data

Janell R. Kause

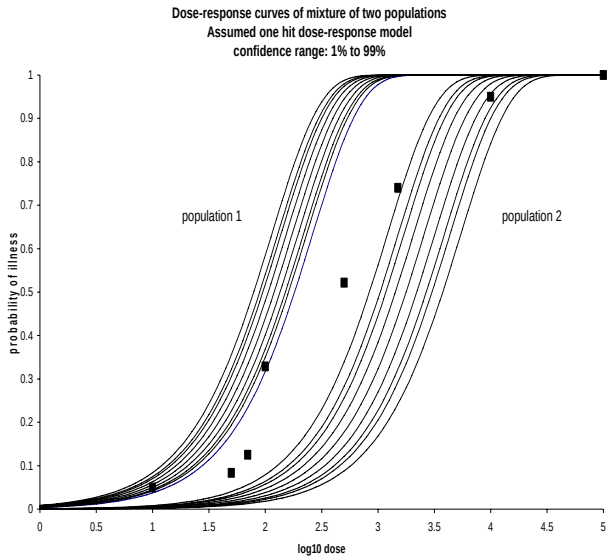
Office of Public Health Science

Why Assess Risk?

- Systematically address food safety issues
- Improve the utilization of federal resources to provide better public health assurance
- Structured formal process to ensure objectivity in decision-making
- Framework increases transparency to garner public input

Terminology

- **Risk = Hazard * Exposure**
- **Risk:** Likelihood of illness/death from exposure to hazard
- **Hazard:** chemical, physical, or biological agent that could cause harm
- **Exposure:** likelihood of hazard being ingested (frequency/amount)



Exposure

- Presence and amount of hazard in each serving of food

and

- Number of food servings containing a given amount of hazard

Risk-Based Inspection

- Risk varies across products produced at various establishments
- Exposure: Characteristics that contribute to presence and amount of hazard in a serving of food
  - Product supports the survival and growth of a pathogen
  - Process specifics (time and temperature conditions; line speed)
  - Interventions in place
  - Test and hold programs and testing
  - Disposition of the product
  - Empirical indicators include microbial test results
- Exposure: Number of servings that contain a likely amount of hazard
  - Production volume

Production Volume

- Important part of determining public health exposure and subsequent risk
- Not itself a predictor of the likelihood of contamination of foods
- Used to distinguish between establishments within the same risk categories
- Several other factors are used to categorize risk, including product type, process, interventions, and past test results
- **Real focus: How do you weight "volume"?**

Thank you